

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
27 May 2004 (27.05.2004)

PCT

(10) International Publication Number  
**WO 2004/044561 A1**

(51) International Patent Classification<sup>7</sup>: G01N 21/05, 30/74

(72) Inventor; and  
(75) Inventor/Applicant (for US only): BLAIR, Robert, William [AU/AU]; 11 Birkdale Close, Wantirna, Victoria 3152 (AU).

(21) International Application Number:  
PCT/AU2003/001492

(22) International Filing Date:  
11 November 2003 (11.11.2003)

(74) Agent: PHILLIPS ORMONDE & FITZPATRICK; 367 Collins Street, Melbourne, Victoria 3000 (AU).

(25) Filing Language: English

(81) Designated States (national): AU, CN, JP, US.

(26) Publication Language: English

(84) Designated States (regional): European patent (DE, FR, GB).

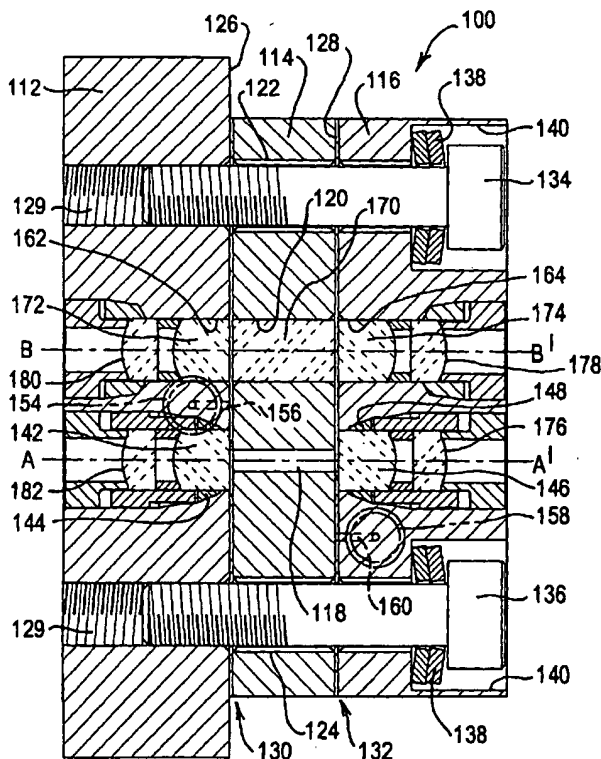
(30) Priority Data:  
2002952602 12 November 2002 (12.11.2002) AU

Published:  
— with international search report

(71) Applicant (for all designated States except US): VARIAN AUSTRALIA PTY LTD [AU/AU]; 679 Springvale Road, Mulgrave, Victoria 3170 (AU).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: FLOW THROUGH CELL FOR OPTICAL SPECTROSCOPY



(57) Abstract: A flow through cell (100) for use in a spectrophotometer for analysis of dissolved chemical substances in a flowing liquid stream is made up of at least an intermediate body member (114) located between two other body members (112, 116). The body members are of regular shape, for example rectangular parallelepiped and are clamped together, for example by machine screws (134, 136). Thus the cell is relatively easily manufacturable. The clamped together body members define a flow through passage which includes a hole (118) through the intermediate body member (114) and a liquid inlet region at one end of the hole and a liquid outlet region at the other end of the hole, which regions may be provided by galleries (150, 152) in sealing gaskets (130, 132) between the body members. The two other body members each include an optically transparent window (142, 146) at an end of the hole (118) thereby providing an optical pathway (A, A') through part of the flow through passage. The liquid inlet and outlet regions at the ends of hole (118) are such that the liquid flow on entering and leaving the optical pathway (A, A') occurs adjacent the optical windows transversely of the flow along the optical pathway. Thus the liquid flow sweeps across the optical windows (142, 146) and flushes the hole (118) of the optical pathway by successive increments of the liquid with minimal mixing.